

THOMAS BADET

PhD

CONTACT

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EXPERIENCES

present - 01/04/2021 **Maître-Assistant lecturer**
UNINE, Prof Vermeer's lab

01/04/2025 - 01/04/2018 **Post-doctoral researcher**
UNINE, Prof Croll's lab
Genome evolution in fungi

28/02/2018 - 01/11/2014 **PhD student**
LIPM INRA-CNRS, Dr Raffaele's supervision
Plant pathology

30/06/2014 - 01/11/2013 **MASTER'S THESIS**
LIPM INRA-CNRS, Dr Raffaele's supervision
Quantitative Disease Resistance

TRAINING

21/12/2017 **PhD in Plant Microbe Interactions**
Paul Sabatier University - Toulouse III

06/2014 - 09/2012 **Master degree in Plant Bioscience**
Paul Sabatier University - Toulouse III
Plant Microbe Interactions

06/2011 - 09/2007 **Bachelor degree in Biology**
Rennes I University
Cellular Biology and Microbiology

SKILLS

MOLECULAR BIOLOGY

Plant and fungi DNA/RNA extraction
PCR, qRT-PCR, cloning

CELLULAR BIOLOGY

Agrobacterium-mediated transitory transgene expression
Confocal microscopy and axiozoom

COMPUTATIONAL BIOLOGY

Genome/transcriptome mapping, variant calling
Genome-wide association
Genome-scale analysis

PERSONAL

Autonomy
Scientific planification

COMMUNICATIONS

01/2026 **Phytopathology - Mycology meeting**
Invited speaker

11/2025 **Symposium on Fungal Genetics in IDF**
Invited speaker

03/2025 **ECFG17 meeting**
Attendee poster

01/2025 **Swiss Plant meeting**
Attendee talk

04/2024 **ICTE24 meeting**
Attendee poster

03/2023 **ECFG16 meeting**
Attendee poster

01/2023 **Swiss Plant meeting**
Attendee talk

06/2020 **Lausanne Genomics Days**
Invited talk

10/2020 **RIP2020 meeting**
Attendee / organizing committee

09/2019 **HOST-MICROBE GENOMICS meeting**
Attendee poster

07/2019 **SMBE meeting**
Attendee poster

09/2018 **EMBO Workshop-Experimental Approaches to Evolution and Ecology**
Attendee poster

11/2017 **HOST-MICROBE GENOMICS meeting**
Attendee talk

05/2017 **CELLULAR & MOLECULAR FUNGAL BIOLOGY GORDON RESEARCH**
Attendee poster

05/2016 **RESISTANCE network**
Attendee talk

06/2016 **PLANT HEALTH and ENVIRONMENT (SPE) PhD STUDENT MEETING**
Organizer

07/2014 **PLANT PHYSIOLOGY TEACHING**

PUBLICATIONS

Root tip excision-induced exodermis lignification impacts lateral root emergence in *Brachypodium distachyon*.
Bellande K, De Jesus Vieira Teixeira C, D'Orlando A, Perez L, Sibout R, Roulin AC, Vermeer JEM and Badet T
New Phytologist 2026

High-throughput discovery of emerging antifungal resistance in crop pathogens.
Puccetti G, Flückiger D, Edel D, Delude C, Tralamazza SM, Badet T, Scalliet G and Croll D
bioRxiv 2025 (under revisions at Nature Microbiology)

A large European diversity panel reveals complex azole fungicide resistance gains of a major wheat pathogen.
Puccetti G, Badet T, Flückiger D, Edel D, Feurtey A, Delude C, Gluck-Thaler E, Torriani SFF, Scalliet G and Croll D
mBio 2025

A retrotransposon insertion upstream of Arabidopsis thaliana CRK8 receptor-like kinase modulates a trade-off between pathogen defense and salt tolerance.
Macquet J, Badet T, Carvalho-Silva P, Zaffuto M and Raffaele S
The Plant Journal 2025

A systematic screen for genetic factors underpinning transposon defense systems across the fungal kingdom
Badet T and Croll D
PLOS Biology 2025

An inversion polymorphism under balancing selection, involving giant mobile elements, in an invasive fungal pathogen
Hartmann FE, Rodriguez de la Vega RC, Demené A, Badet T, Vernadet J-P, Rougemont Q, Labat A, Snirc A, Stauber L, Croll D, Prospero S, Dutech C and Giraud T
Molecular Biology and Evolution 2025

Recent reactivation of a pathogenicity-associated transposable element is associated with major chromosomal rearrangements in a fungal wheat pathogen
Badet T, Moser Tralamazza S, Feurtey A and Croll D
Nucleic Acids Research 2024

A systematic screen for co-option of transposable elements across the fungal kingdom
Oggenfuss U, Badet T and Croll D
Mobile DNA 2024

Machine-learning predicts genomic determinants of meiosis-driven structural variation in a eukaryotic pathogen.
Badet T, Fouché S, Hartmann FE, Zala M and Croll D
Nature Communications 2021

Emergence and diversification of a highly invasive chestnut pathogen lineage across south-eastern Europe.
Stauber L, Badet T, Feurtey A, Prospero S and Croll D
eLife 2021

A population-level invasion by transposable elements triggers genome expansion in a fungal pathogen.
Oggenfuss U, Badet T, Wicker T, Hartmann FE, Singh NK, Abraham LN, Karisto P, Vonlanthen T, Mundt CC, McDonald BA and Croll D
eLife 2021

Rapid sequence evolution driven by transposable elements at a virulence locus in a fungal wheat pathogen.
Kumar Singh N, Badet T, Abraham L and Croll D
BMC Genomics 2021

The rise and fall of genes: origins and functions of plant pathogen pangenomes
Badet T and Croll D
Current Opinion in Plant Biology 2020

A 19-isolate reference-quality global pangenome for the fungal wheat pathogen *Zymoseptoria tritici*.
Badet T, Oggenfuss U, Abraham L, McDonald BA and Croll D
BMC Biology 2020

Stress-Driven Transposable Element De-repression Dynamics and Virulence Evolution in a Fungal Pathogen.
Fouché S, Badet T, Oggenfuss U, Plissonneau C, Francisco CS and Croll D
Molecular Biology and Evolution 2019

Expression polymorphism at the *ARPC4* locus links the actin cytoskeleton with quantitative disease resistance to *Sclerotinia sclerotiorum* in *Arabidopsis thaliana*.
Badet T, Léger O, Barascud M, Voisin D, Sadon P, Vincent R, Le Ru A, Balagué C, Roby D and Raffaele S
New Phytol. 2019

Parallel evolution of the *POQR* prolyl oligo peptidase gene conferring plant quantitative disease resistance.
Badet T, Voisin D, Mbengue M, Barascud M, Sucher J, Sadon P, Balagué C, Roby D and Raffaele S
PLoS Genetics 2017

Codon optimization underpins generalist parasitism in fungi.
Badet T, Remi P, Mbengue M, Navaud O, Derbyshire M, Oliver PR, Barbacci A and Raffaele S
eLife 2017

Emerging Trends in Molecular Interactions between Plants and the Broad Host Range Fungal Pathogens *Botrytis cinerea* and *Sclerotinia sclerotiorum*.
Mbengue M, Navaud O, Peyraud R, Barascud M, Badet T, Vincent R, Barbacci A and Raffaele S
Frontiers in Plant Science 2016

Common protein sequence signatures associate with *Sclerotinia borealis* lifestyle and secretion in fungal pathogens of the *Sclerotiniaceae*.
Badet T, Remi P and Raffaele S
Frontiers in Plant Science 2015

Resistance to phytopathogens *e tutti quanti*: placing plant quantitative disease resistance on the map.
Roux F, Voisin D, Badet T, Balagué C, Barlet X, Huard-Chauveau C, Roby D and Raffaele S
Molecular Plant Pathology 2014

SIDE EXPERIENCES

- FUNGI PICKING
- ASSOCIATIVE WORK
- MUSIC
- RADIO (SCIENTIFIC VULGARISATION)

TEACHING

MSc

Plant Pathology
Bioinformatic tools

BSc

Introduction to Phytopathology

REFEREES

SYLVAIN RAFFAELE
Research Director INRA | LIPM
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